

	Salt and Nitrate Management Scenarios				
	0. Baseline	1. Greater Irrigation Efficiency & Artificial Recharge	2. Post-Regulatory, Lower N Loading	3. Irrigation Efficiency, N Loading, & Artificial Recharge Changes	4. Extreme No-Agriculture ⁸
Recharge & Irrigation Efficiency¹	Existing	↑ Existing	Existing	↑ Existing	↓↓ Existing
<i>Stormwater Recharge</i>	Current projects	Add IRWMP recharge projects ²	Current projects	Add IRWMP recharge projects ²	Add IRWMP recharge projects ²
<i>Shifts in Irrigation Systems</i>	0% drip irrigation	80% drip irrigation ³	0% drip irrigation	80% drip irrigation ³	NO Agricultural Irrigation
<i>Source Water Modification</i>	Existing sources	Bring in water from outside current boundary ⁴	Existing Sources	Bring in water from outside current boundary ⁴	NO Agricultural Irrigation
<i>Groundwater-Surface Water application</i>	50%/50% blend	50%/50% blend	50%/50% blend	50%/50% blend	NO Agricultural Irrigation
Nitrogen Loading to land³	Existing	Existing	↓ Existing	↓ Existing	↓↓ Existing
<i>Dairy General Order</i>	Before	Before	After ⁵	After ⁵	No Dairies
<i>Irrigated Lands Regulatory Program</i>	Before	Before	After ⁶	After ⁶	No Irrigated Lands
<i>Land Uses</i>	Most recent DWR Land use	Most recent DWR Land use	Most recent DWR Land use	Most recent DWR Land use	Native Vegetation and Urban Only
<i>POTW Effluent</i>	25 mg/L Nitrogen	25 mg/L Nitrogen	10 mg/L Nitrogen	10 mg/L Nitrogen	10 mg/L Nitrogen
<i>POTW Loading to Land</i>	Current loads	Current loads	Current loads	Current loads	Current loads
<i>Crop Yield & Uptake</i>	Yields and uptake as determined by SWAT ⁷	Yields and uptake as determined by SWAT ⁷	Yields and uptake as determined by SWAT ⁷	Yields and uptake as determined by SWAT ⁷	No agriculture

1 - Increased irrigation efficiency means decreasing overall recharge to groundwater

2 - IRWMP recharge projects 33, 34, 36, 40, 41, 42, 138

3 - N loading to land depends on fertilization decisions. N loading to groundwater is indirectly affected, but depends on many other modeled factors, such as the amount and timing of leaching water relative to root zone N concentration patterns.

4 - Shift from groundwater to more dilute surface water supply would reduce TDS load. Not completed in this study (see text).

5 - Reduction in loading rates to land application fields as described in **Appendix B**

6 - Reduction in loading rates as described in **Appendix B**

7 - Crop yield and uptake are determined by crop growth models contained in SWAT, in response to climatic, fertility, moisture, and other conditions.

8 - Extreme scenario assumptions - Replace all irrigated lands & dairy with native plant communities (as may establish under these conditions); Retain all other land cover classes as they are; Remove irrigation; Remove fertilization and amendments; Retain POTW loading inputs as they are; Retain stormwater recharge with the current IRWMP projects; Summarize over the 10-year and 30-year model timeframe